

CLAIMS

1. Polymer composition which can be produced by polymerisation of

- a) 1 to 50%-wt of polar (meth)acrylates with Tserevitinov hydrogen, selected from the group comprising 2-hydroxyethyl (meth)acrylate, 3-hydroxypropyl (meth)acrylate, 4-hydroxybutyl (meth)acrylate, PEG (meth)acrylates, PPG (meth)acrylates, 2-aminoethyl (meth)acrylate, 3-aminopropyl (meth)acrylate and 4-aminobutyl (meth)acrylate, as well as reaction products of acrylic or methacrylic acid with bi-, tri- or higher functional alcohols, as well ethoxylation, propoxylation and butoxylation products thereof with terminal hydroxy, amino, urethane or thio groups containing at least one active hydrogen.
- b) 50 to 99%-wt of apolar (meth)acrylates,
- c) in the presence of a bi-, tri- or higher functional (meth)acrylate, or of a (poly)functional compound which is reactive to Tserevitinov hydrogens and is selected from the group consisting of mono-, bi- and polyepoxides, mono-, bi- and polyaziridines and melamine and its derivatives, or of a mixture of two or more of the aforementioned compounds, the weight percentages indicated under a) to c), adding up to 100%-wt,

- d) with addition of 0.05 to 5%-wt of an initiator, relative to the sum of the components of a) to c), and
- e) up to 90%-wt of a liquid, chemically inert medium, relative to the solid matter content of the sum of the components of a) to d).

2. Polymer composition according to claim 1, characterized in that the polar (meth)acrylates do not contain carboxyl groups.

3. Polymer composition according to any one of the preceding claims, characterized in that the polar (meth)acrylates are selected from the group of the hydroxy(meth)acrylates.

4. Polymer composition according to any one of claims 1 or 2, characterized in that the polar (meth)acrylates are selected from the group of the amino(meth)acrylates.

5. Polymer composition according to any one of the preceding claims, characterized in that the apolar (meth)acrylates are esterification products of acrylic acid or methacrylic acid with monovalent alcohols or amines.

6. Polymer composition according to claim 5, characterized in that the apolar (meth)acrylates are selected from the group of alkyl (meth)acrylamides.

7. Polymer composition according to claim 6, characterized in that the apolar (meth)acrylates are esterification products of acrylic acid or methacrylic acid with monohydric alcohols having 6 to 15 C atoms, preferably 6 to 10 C atoms.

8. Polymer composition according to claim 7, characterized in that the apolar (meth)acrylates are selected from the group consisting of methyl (meth)acrylate, ethyl (meth)acrylate, butyl (meth)acrylate, hexyl (meth)acrylate, isooctyl (meth)acrylate, 2-ethylhexyl (meth)acrylate, isodecyl (meth)acrylate and isobornyl (meth)acrylate.

9. Polymer composition according to any one of the preceding claims, characterized in that the di-, tri- or higher functional (meth)acrylates are selected from the group consisting of the conversion products of (meth)acrylic acid with diols, triols or polyols, the analogous vinyl ethers or mixtures thereof, as well as (meth)acrylated polyesters and (meth)acrylated polyurethanes.

10. Polymer composition according to claim 9, characterized in that the (meth)acrylated polyesters are conversion products of OH-terminated polyester polyols with (meth)acrylic acid or reaction products of carboxyl groups-containing polyester polyols with hydroxyl groups-containing (meth)acrylates.

11. Polymer composition according to claim 9, characterized in that the (meth)acrylated polyurethanes are conversion products of amine- or hydroxyl-terminated (meth)acrylates with diisocyanates or polyisocyanates.

12. Polymer composition according to any one of claims 1 to 11 characterized in that the polymer composition contains a further compound which is reactive to Tserevitinov hydrogen and which is selected from the group consisting of mono-, di- and polyisocyanates.

13. Process for the production of a polymer composition according to any one of the preceding claims, characterized in that it comprises a polymerisation reaction which is performed free of solvent, in water, or in an organic, inert solvent.

14. Use of the polymer composition according to any one of claims 1 to 12, as adhesive or as sealant.

15. Use of the polymer composition according to any one of claims 1 to 12 for the production of pressure sensitive adhesive tapes.